

Barpa
USER MANUAL

Rel. 01.00.0004
(Hardware code: Barpa)



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Please, contact:

IPSES S.r.l. - Via Suor Lazzarotto, 10 - 20020 Cesate (MI) Italy

Tel. (+39) 02 39449519 – (+39) 02 320629547

Fax (+39) 02 700403170

<http://www.ipses.com> - e-mail: support@ipses.com

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WARNING!
ELECTRICAL DEVICES COULD DAMAGE EQUIPMENT OR PROPERTY OR CAUSE PERSONAL INJURY

This guide contains instructions and technical features of the Barpa.

Read with attention before attempting to install.

It is the responsibility of the technician to undertake all the safety rules provided by the law during the installation and the use of this device.

For any information which is not contained in this guide, please contact:

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Tel. (+39) 02 39449519 – (+39) 02 320629547
Fax (+39) 02 700403170
<http://www.ipses.com> - e-mail: support@ipses.com

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REVISION HISTORY

Manual revision history

Revision/ Date	Change description	Author
01.00.0000 February 2008	First version Released	Barbera D.
01.00.0001 October 2009	Update contacts, other minor changes	Mancuso C.
01.00.0002 June 2011	Minor changes	Mancuso C.
01.00.0003 June 2015	Update document layout	Bottaccioli M.
01.00.0004 August, 2016	Added ISO 9001:20015 logo	Bottaccioli M.

DESCRIPTION

Barpa is a low noise preamplifier to be used in all applications needing velocity and low noise, as fotomultiplier, electron multipliers and other devices for *photon counting* and *ion counting*.

Barpa has a typical input resistance of 50 ohm which represents the current impulse load of the detector which is connected to.



Thanks to its small dimensions and its light weight, Barpa can be directly put onto the detector; by this way the wake signal would not be spread around link cable.



Front



BNC input connector

Rear



Power cable

BNC output connector

INSTALLATION (START-UP/CONFIGURATION)

Barpa has two BNC coaxial connectors and a power cable (2 meters long) ending with a DB9 connector. The male BNC coaxial connector must be placed the closest to the output device (the signal of which will be amplified), while the female BNC will give the amplified signal by a normal 50 ohm coaxial cable.



DB9 connector, instead, must be linked to a 12V dual power supply. Pay attention to power links, because a wrong connection may cause an irreversible damage to Barpa.



CONNECTIONS

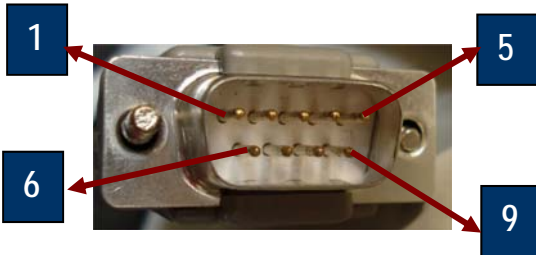
Front BNC: input connector to amplify signal.



Rear BNC: amplified signal output connector.



Power DB9:



Pin1: 0V - GND.
Pin2: 0V - GND.
Pin3: not connected.
Pin4: +12V.
Pin5: not connected.
Pin6: not connected.
Pin7: not connected.
Pin8: not connected.
Pin9: -12V.
Shield: Barpa metallic case

Note: all grounds (both from BNC and for power supply) and metallic case are linked to each other.

MAINTAINANCE

Barpa does not require particular attention to be maintained, because its components do not waist in time.

The only attention to keep is to control periodically cable links and if connectors are oxided, to avoid electrical characteristics variations and consequently lower performances.

TECHNICAL FEATURES

Input impedance : 50 ohm.

Input connector : Front-panel BNC.

Input equivalent noise (RMS) : 30 μ V nearly.

Power gain: 11, not inverting.

Band width (-3dB) : 55 MHz.

Output impedance : 50 ohm.

Output connector : Rear-panel BNC.

Power : dual, +/-12V, 10mA.

Dimensions : 51 x 51 x 31 mm (excepted connectors).

PRODUCT CODE

Code	Description
Barpa	Low noise preamplifier
Coax-BNC	BNC coaxial cable (to link Barpa with acquire system)

CONTACTS

IPSES S.r.l. conceives, projects and markets electronic and scientific instruments. The customized planning of our devices allows us to answer specific necessities for customers asking for embedded systems. IPSES clients enjoy access to a dedicated project engineering team, available as needed.

Our pool consists of highly competent professionals whose experience in this field is extremely strong. Thanks to constant updating and technical development, IPSES is a leading company, combining the dynamism of a young group into the competence and reliability of a qualified staff.

IPSES S.r.l.

Research and development office:
Via Suor Lazzarotto, 10
20020 Cesate (MI)
Italy

tel. (+39) 02 39449519 - (+39) 02 320629547
fax (+39) 02 700403170
e-mail: info@ipses.com
<http://www.ipses.com>



SUPPORT INFORMATION

The customer is at liberty to contact the relevant engineer at IPSES S.r.l. directly.

Telephone	:	(+39) 02 39449519 (+39) 02 320629547
Fax	:	(+39) 02 700403170
Email	:	support@ipses.com

PROBLEM REPORT

The next page is a standard template used for reporting system problems. It can be copied and send as a fax. Alternative bugs may be reported by emails, in this case please insure that the mail contains similar information listed in the *Engineering Problem Report* form.

ENGINEERING PROBLEM REPORT

Problem describer

Name		IPSES s.r.l. Via Suor Lazzarotto, 10 Cesate (MI) Italy Fax (+39) 02 700403170 e-mail support@ipses.com
Company		
Date	Tel.	

Product

Name	Version	Serial No.
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Report Type (bug, change request or technical problem)

Major bug	<input type="checkbox"/>	Urgency:	
Minor bug	<input type="checkbox"/>	High	<input type="checkbox"/>
Change request	<input type="checkbox"/>	Medium	<input type="checkbox"/>
Technical problem	<input type="checkbox"/>	Low	<input type="checkbox"/>

Problem Description

Reproduction of Problem

IPSES s.r.l. Action notes

Received by	Date	Report No.	Action
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(Product code Barpa Rel. 01.00.0004)

IPSES S.r.l.

Via Suor Lazzarotto, 10

20020 Cesate (MI) - ITALY

Tel. (+39) 02 39449519 – (+39) 02 320629547

Fax (+39) 02 700403170

e-mail: info@ipses.com

support@ipses.com